WEST Search History

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DATE: Friday, January 14, 2005

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	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=NO; OP=OR		
☐	L22	L21 and reflection	29
☐	L21	l19 and (polymer near5 synthesis)	66
☐	L20	(sensor adj matrix) and L19	1
☐	L19	L18 and uv	289
☐	L18	l15 and (ccd)	609
☐	L17	6271957.pn.	2
☐	L16	L15 near20(micro adj mirror adj array)	8
☐	L15	(array$ near20 photolithograph$$$$)	4734
☐	L14	l11 and (reflection near matrix)	4
☐	L13	L11 and l10	1
☐	L12	L11 and l6	0
☐	L11	(illumination near matrix)	115
☐	L10	(light near sensor near matrix)	36
☐	L9	L8 and l6	0
☐	L8	ccd adj matrix	624
☐	L7	ccd matrix	738652
☐	L6	(micro near mirror near array)	491
☐	L5	digital near optical near chemistry	15
	DB=USPT; PLUR=NO; OP=OR		
☐	L4	5405783.pn.	1
☐	L3	6066448.pn.	1
☐	L2	6066448	19
☐	L1	6586211.pn.	1

END OF SEARCH HISTORY

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(FILE 'HOME' ENTERED AT 13:47:19 ON 14 JAN 2005)

     FILE 'STNGUIDE' ENTERED AT 13:47:26 ON 14 JAN 2005

     FILE 'HOME' ENTERED AT 13:47:31 ON 14 JAN 2005

     FILE 'MEDLINE, CAPLUS, SCISEARCH, BIOSIS' ENTERED AT 13:47:42 ON 14 JAN
     2005
L1           216 S MICROMIRROR ARRAY#
L2            19 S PHOTOLITHOGRAPH##### AND L1

     FILE 'STNGUIDE' ENTERED AT 13:49:10 ON 14 JAN 2005

     FILE 'MEDLINE, CAPLUS, SCISEARCH, BIOSIS' ENTERED AT 13:56:55 ON 14 JAN
     2005
L3            12 DUPLICATE REMOVE L2 MEDLINE  (7 DUPLICATES REMOVED)

     FILE 'STNGUIDE' ENTERED AT 14:01:27 ON 14 JAN 2005

     FILE 'MEDLINE, CAPLUS, SCISEARCH, BIOSIS' ENTERED AT 14:03:50 ON 14 JAN
     2005
               E STAHLER CORD F/AU
L4             6 S E2-E4

     FILE 'STNGUIDE' ENTERED AT 14:05:47 ON 14 JAN 2005

     FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 14:07:31 ON 14 JAN 2005

     FILE 'STNGUIDE' ENTERED AT 14:07:32 ON 14 JAN 2005

     FILE 'MEDLINE, CAPLUS, SCISEARCH, BIOSIS' ENTERED AT 14:09:31 ON 14 JAN
     2005
               E STAHLER PEER F/AU
L5            15 S E1-E4
L6            11 DUPLICATE REMOVE L5 (4 DUPLICATES REMOVED)

     FILE 'STNGUIDE' ENTERED AT 14:11:35 ON 14 JAN 2005

     FILE 'MEDLINE, CAPLUS, SCISEARCH, BIOSIS' ENTERED AT 14:15:19 ON 14 JAN
     2005
               E MULLER MANFRED/AU
L7             0 S E3-EE7
L8            71 S E3-E7
L9            67 DUPLICATE REMOVE L8 (4 DUPLICATES REMOVED)
L10            0 S L9 AND MICROMIRROR
L11            5 S L9 AND ARRAY#

     FILE 'STNGUIDE' ENTERED AT 14:17:47 ON 14 JAN 2005

     FILE 'MEDLINE, CAPLUS' ENTERED AT 14:18:24 ON 14 JAN 2005

     FILE 'STNGUIDE' ENTERED AT 14:18:24 ON 14 JAN 2005

     FILE 'MEDLINE, CAPLUS' ENTERED AT 14:18:44 ON 14 JAN 2005
               E LINDNER HANS/AU
L12          176 S E3-E12
L13            1 S L12 AND ARRAY#

     FILE 'STNGUIDE' ENTERED AT 14:20:04 ON 14 JAN 2005
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L4 ANSWER 1 OF 6 MEDLINE on STN
AN 2003548843 MEDLINE
DN PubMed ID: 14627841
TI Validation of a novel, fully integrated and flexible microarray benchtop facility for gene expression profiling.
AU Baum Michael; Bielau Simone; Rittner Nicole; Schmid Kathrin; Eggelbusch Kathrin; Dahms Michael; Schlauersbach Andrea; Tahedl Harald; Beier Markus; Guimil Ramon; Scheffler Matthias; Hermann Carsten; Funk Jorg-Michael; Wixmerten Anke; Rebscher Hans; Honig Matthias; Andreae Claas; Buchner Daniel; Moschel Erich; Glathe Andreas; Jager Evelyn; Thom Marc; Greil Andreas; Bestvater Felix; Obermeier Frank; Burgmaier Josef; Thome Klaus; Weichert Sigrid; Hein Silke; Binnewies Tim; Foitzik Volker; Muller Manfred; **Stahler Cord Friedrich**; Stahler Peer Friedrich
CS febit ag, Kafertaler Strasse 190, 68167 Mannheim, Germany.. michael.baum@febit.de
SO Nucleic acids research, (2003 Dec 1) 31 (23) e151. Journal code: 0411011. ISSN: 1362-4962.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200406
ED Entered STN: 20031121
Last Updated on STN: 20040701
Entered Medline: 20040630
AB Here we describe a novel microarray platform that integrates all functions needed to perform any array-based experiment in a compact instrument on the researcher's laboratory benchtop. Oligonucle otide probes are synthesized in situ via a light- activated process within the channels of a three-dimensional microfluidic reaction carrier. Arrays can be designed and produced within hours according to the user's requirements. They are processed in a fully automatic workflow. We have characterized this new platform with regard to dynamic range, discrimination power, reproducibility and accuracy of biological results. The instrument detects sample RNAs present at a frequency of 1:100 000. Detection is quantitative over more than two orders of magnitude. Experiments on four identical arrays with 6398 features each revealed a mean coefficient of variation (CV) value of 0.09 for the 6398 unprocessed raw intensities indicating high reproducibility. In a more elaborate experiment targeting 1125 yeast genes from an unbiased selection, a mean CV of 0.11 on the fold change level was found. Analyzing the transcriptional response of yeast to osmotic shock, we found that biological data acquired on our platform are in good agreement with data from Affymetrix GeneChips, quantitative real-time PCR and--albeit somewhat less clearly--to data from spotted cDNA arrays obtained from the literature.
CT Check Tags: Support, Non-U.S. Gov't
Automation: IS, instrumentation
*Gene Expression Profiling: IS, instrumentation
Genes, Fungal: GE, genetics
*Oligonucleotide Array Sequence Analysis: IS, instrumentation
RNA, Fungal: AN, analysis
RNA, Fungal: GE, genetics
RNA, Messenger: AN, analysis
RNA, Messenger: GE, genetics
Reproducibility of Results
Saccharomyces cerevisiae: GE, genetics
Sensitivity and Specificity
CN 0 (RNA, Fungal); 0 (RNA, Messenger)

L11 ANSWER 1 OF 5 MEDLINE on STN
AN 2003548843 MEDLINE
DN PubMed ID: 14627841
TI Validation of a novel, fully integrated and flexible microarray benchtop facility for gene expression profiling.
AU Baum Michael; Bielau Simone; Rittner Nicole; Schmid Kathrin; Eggelbusch Kathrin; Dahms Michael; Schlauersbach Andrea; Tahedl Harald; Beier Markus; Guimil Ramon; Scheffler Matthias; Hermann Carsten; Funk Jorg-Michael; Wixmerten Anke; Rebscher Hans; Honig Matthias; Andreae Claas; Buchner Daniel; Moschel Erich; Glathe Andreas; Jager Evelyn; Thom Marc; Greil Andreas; Bestvater Felix; Obermeier Frank; Burgmaier Josef; Thome Klaus; Weichert Sigrid; Hein Silke; Binnewies Tim; Foitzik Volker; **Muller Manfred**; Stahler Cord Friedrich; Stahler Peer Friedrich
CS febit ag, Kafertaler Strasse 190, 68167 Mannheim, Germany.. michael.baum@febit.de
SO Nucleic acids research, (2003 Dec 1) 31 (23) e151. Journal code: 0411011. ISSN: 1362-4962.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200406
ED Entered STN: 20031121
Last Updated on STN: 20040701
Entered Medline: 20040630
AB Here we describe a novel microarray platform that integrates all functions needed to perform any **array**-based experiment in a compact instrument on the researcher's laboratory benchtop. Oligonucle otide probes are synthesized in situ via a light- activated process within the channels of a three-dimensional microfluidic reaction carrier. **Arrays** can be designed and produced within hours according to the user's requirements. They are processed in a fully automatic workflow. We have characterized this new platform with regard to dynamic range, discrimination power, reproducibility and accuracy of biological results. The instrument detects sample RNAs present at a frequency of 1:100 000. Detection is quantitative over more than two orders of magnitude. Experiments on four identical **arrays** with 6398 features each revealed a mean coefficient of variation (CV) value of 0.09 for the 6398 unprocessed raw intensities indicating high reproducibility. In a more elaborate experiment targeting 1125 yeast genes from an unbiased selection, a mean CV of 0.11 on the fold change level was found. Analyzing the transcriptional response of yeast to osmotic shock, we found that biological data acquired on our platform are in good agreement with data from Affymetrix GeneChips, quantitative real-time PCR and--albeit somewhat less clearly--to data from spotted cDNA **arrays** obtained from the literature.
CT Check Tags: Support, Non-U.S. Gov't
Automation: IS, instrumentation
*Gene Expression Profiling: IS, instrumentation
Genes, Fungal: GE, genetics
***Oligonucleotide Array Sequence Analysis: IS, instrumentation**
RNA, Fungal: AN, analysis
RNA, Fungal: GE, genetics
RNA, Messenger: AN, analysis
RNA, Messenger: GE, genetics
Reproducibility of Results
Saccharomyces cerevisiae: GE, genetics
Sensitivity and Specificity
CN 0 (RNA, Fungal); 0 (RNA, Messenger)

L13 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:253917 CAPLUS
DN 133:144342
ED Entered STN: 20 Apr 2000
TI Trends and solutions in microarray production
AU Kuhn, Claus; Dobler, Hannes; Klumpp, Bernhard; **Lindner, Hans**
CS Fraunhofer Institut fur Produktionstechnik und Automatisierung, Stuttgart, Germany
SO Bioforum International (2000), 4(1), 30-31
CODEN: BINTFQ; ISSN: 1434-2693
PB GIT Verlag GmbH
DT Journal; General Review
LA English
CC 1-0 (Pharmacology)
Section cross-reference(s): 3, 9, 20, 47, 63
AB A review with 30 refs. In the pharmaceutical industry a large amount of money is spent for preclin. and clin. research. The development of one drug easily costs millions of dollars because hundreds and thousands of tests are being conducted. The demand for high-throughput and cost effective anal. of complex mixts. has led technol. toward the development and application of compact, high-d. **array** devices. So called biochips have numerous locations of different probes (=**arrays**), e. g. DNA-fragments, which allows for a multiparallel anal. of a sample. The information about the sequence of the DNA-fragment is related to the geometric location of the sample. Biochips are applied in gene expression, DNA-sequencing, immuno-diagnostics etc. The advantages of these biochips are: they require less reagent volume, they make anal. processes run faster because of their smaller size and they give the opportunity to implement more sensitive detection methods. By this they reduce costs, save time and improve quality. Different technologies are applied to create high d. **arrays** on the surface of a biochip. As printing technol. is very flexible, and promises a high step yield, the focus is on this technol. To create these high d. **arrays** certain requirements must be met concerning printing technol., handling technol., material and informational flow and environmental conditioning.
ST review DNA microarray biochip prodn
IT Biotechnology
(biochips; trends and solns. in microarray production)
IT DNA
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
(microarrays; trends and solns. in microarray production)
IT Drug screening
Genetic mapping
Pharmaceutical industry
(trends and solns. in microarray production)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Dobler, H; Trends and Solutions in Microarray Production 1999
(2) Karri, L; Analytical Chemistry 1998, V70(7)
(3) Marshall, A; Nature Biotechnology 1998, V16, P27 CAPLUS
(4) Muller, M; TopSpot - A new Method for the Fabrication of BioChips 1999

L3 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
AN 2003:145559 CAPLUS
DN 139:257447
ED Entered STN: 26 Feb 2003
TI Protein patterning by virtual mask **photolithography** using a **micromirror array**
AU Lee, Kook-Nyung; Shin, Dong-Sik; Lee, Yoon-Sik; Kim, Yong-Kweon
CS School of Electrical Engineering and Computer Science, Seoul National University, S. Korea
SO Journal of Micromechanics and Microengineering (2003), 13(1), 18-25
CODEN: JMMIEZ; ISSN: 0960-1317
PB Institute of Physics Publishing
DT Journal
LA English
CC 9-1 (Biochemical Methods)
AB The successful development of biosensors and protein chips requires a method for protein patterning on a solid surface. We describe a virtual mask photolithog. method for the surface patterning of proteins on a chip using a **micromirror array** (MMA) and its characterization. The excitation light was switched on or off using the MMA, and the light pattern was transferred using the pattern of switched-on mirrors. The nitroveratryloxycarbonyl (NVOC) group was utilized as a photolabile protecting group for protein patterning, so that biomols. could be immobilized on a patterned substrate. When illuminated by UV light, the photolabile protecting group was removed by a chemical reaction, and non-illuminated photolabile protecting groups protected the chip surface. Biotin was coupled only to the region where the protecting group had been removed, and so, biotin-streptavidin patterns were obtained. A two-dimensional MMA was designed and fabricated using micromachining technol. for use as a spatial light modulator. The projection system consisted of the MMA, a light source and other optical components, such as a projection lens. Fluorescein isothiocyanate was used to visualize the NVOC photo-cleavage sites and the biotin-streptavidin reaction. Parallel and quant. expts. required in the development of surface modification technol. for protein immobilization on a surface can easily be performed using this protein patterning system.
ST protein immobilization patterning virtual mask photolithog **micromirror array**
IT Protein microarray technology
(fabrication of; protein patterning by virtual mask photolithog. using **micromirror array**)
IT Proteins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(immobilization of; protein patterning by virtual mask photolithog. using **micromirror array**)
IT Mirrors
(micro-; protein patterning by virtual mask photolithog. using **micromirror array**)
IT Immobilization, molecular or cellular
(of protein; protein patterning by virtual mask photolithog. using **micromirror array**)
IT Plate glass
RL: DEV (Device component use); USES (Uses)
(protein immobilization on; protein patterning by virtual mask photolithog. using **micromirror array**)
IT **Photolithography**
(protein patterning by virtual mask photolithog. using **micromirror array**)
IT UV radiation
(selective photo deprotection by; protein patterning by virtual mask photolithog. using **micromirror array**)

IT Surface
(surface patterning; protein patterning by virtual mask photolithog. using **micromirror array**)
IT 27072-45-3D, Fluorescein isothiocyanate, conjugates with streptavidin
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(for visualization of array patterning; protein patterning by virtual mask photolithog. using **micromirror array**)
IT 58-85-5, Biotin 9013-20-1D, Streptavidin, conjugates with fluorescein isothiocyanate
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(protein patterning by virtual mask photolithog. using **micromirror array**)
IT 158641-92-0
RL: DEV (Device component use); USES (Uses)
(use as protecting reagent in protein immobilization; protein patterning by virtual mask photolithog. using **micromirror array**)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(2) Bodanszky, M; Reactivity and Structure: Concepts in Organic Chemistry 1984, V21, P12
(3) Buher, J; IEEE Microelectromech Syst 1997, V6, P126
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(14) Storment, C; J Microelectromech Syst 1994, V3, P97
(15) Wilchek, M; Methods in Enzymology 1990, V184, P5 CAPLUS